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10/590,009	08/21/2006	Hideyuki Kakuno	071971-0712	7083

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EXAMINER	
BORSETTI, GREG	

ART UNIT	PAPER NUMBER
2626	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/590,009	KAKUNO ET AL.	
	Examiner	Art Unit	
	GREG A. BORSETTI	2626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 August 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 and 2* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 and 2* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-2 are pending.

Response to Arguments

2. Applicant's arguments filed 10590009 have been fully considered but they are not persuasive.

3. Applicant notes "The Examiner appears to not understand the reference to "offset value" recited in claim 1. However, claim 1 expressly recites that the offset values each correspond to one subband, which are used for referencing the first table" The 35 USC 112 2nd rejection has been removed. However, claims 1-2 are now further rejected under 35 USC 112 for not clearly defining the meaning of the "offset values." Offset values are inherently compensatory, because they need a reference to offset from. Furthermore, they are not representative, indices are representative, and the "offset values" are used as indices in the instant application.

4. The examiner respectfully disagrees with Applicant's contention that "Bett is completely silent" (Remarks, Page 5, ¶ 4) about the following features, because:

Bett teaches a "converting of each said allocation table by reducing each group of subbands sharing a pattern to one, said pattern representing a relationship between an index value and the number of quantization steps" in column 1, lines 24-35, *...one method is to compress each tables row of data. Repeated rows are not encoded...* The row of the quantization tables correspond to indices.

Bett teaches "a second step of converting the converted allocation tables in a single first table by reducing each group of subbands sharing said pattern to one" in column 1, lines 26-29, *...if other quantization tables comprise the same row information as one previously compressed, then this table need not be encoded...*, It would be obvious to someone of ordinary skill in the art at the time of the invention that by not encoding duplicate tables, it would be an analogous step to converting the tables into a single table.

Also, Bett teaches "a third step of defining, in a second table, offset values each corresponding to one subband, which are used for referencing the first table" in column 1, lines 29-34, *...the four quantization tables used in MPEG1 (Layer 2) can be compressed into two tables. However, to recreate the original tables, an additional four tables are required. These comprise thirty two values used to point to the start location of the row data stored in one of the two previously compressed tables...*, The secondary tables (corresponding to the four tables) provide offset values that point to the previous two tables and thus the first table.

5. Applicant argues "the referenced compression process of Bett is completely unrelated to the claimed combination." (Remarks, Page 6, ¶ 3) The examiner respectfully disagrees. Bett clearly teaches the application by disclosing a compression process which compresses quantization data tables in MPEG audio encoding by eliminating redundancy of the subband patterns and then referencing indexing tables to decode the information back to its original state.

6. Applicant argues "Bett is merely cumulative to the admitted prior art described on page 1 of Applicants' specification, and is identified in the ISP(R) as an "A" reference having no particular relevance to the claimed invention." (Remarks, Pages 6-7, ¶ 4 and ¶ 1) The examiner respectfully disagrees. Page 2 of the International Search Report submitted as an NPL document on 5/25/2007 clearly shows the corresponding European Bett reference as an "X" reference.

7. Applicant argues "the Examiner makes "obviousness" statements in the ¶ 102 rejection"(Remarks, Page 7, ¶ 2) The examiner apologizes for the typographical error. However, the rejection is clearly underneath a 103 heading where from it should have been clear the rejections were based upon 103 obviousness and not on 102.

8. Applicant argues "Such conclusions by the Examiner are wholly improper as they are based solely on improper hindsight reasoning using Applicants' specification as a guide to interpret the teaches of Bett" (Remarks, Page 7, ¶ 2) In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Where applicant acts as his or her own lexicographer to specifically define a term of a claim contrary to its ordinary meaning, the written description must clearly redefine the claim term and set forth the uncommon definition so as to put one reasonably skilled in the art on notice that the applicant intended to so redefine that claim term. *Process Control Corp. v. HydReclaim Corp.*, 190 F.3d 1350, 1357, 52 USPQ2d 1029, 1033 (Fed. Cir. 1999). The term "offset value" in claim 1 is used by the claim to mean "index", while the accepted meaning is "index or indices." The term is indefinite because the specification does not clearly redefine the term. Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10. Claims 1-2 rejected under 35 U.S.C. 103(a) as being unpatentable over Bett. (US Patent #6430534).

As per claim 1, Bett teaches the decoding method comprising:

a compression process of compressing a plurality of allocation tables used when searching for the number of quantization steps and storing a compressed table in a memory; and (Bett, column 2, lines 65-67, ... *A first aspect of the invention is a method to compress tables of linear quantization data used to digitally represent analog signals*...)

a decoding process of decoding the number of quantization steps by using the compressed table stored in the memory, wherein: (Bett, column 4, lines 20-24, ...*FIG. 1 is a flow chart providing an overview of the processes to decode the compressed quantized levels per subband tables to nbits*...)

a first step of converting each said allocation table by reducing each group of subbands sharing a pattern to one, said pattern representing a relationship between an index value and the number of quantization steps; (Bett, column 1, lines 24-26, ...*There are several methods of compressing the four quantization tables, one method is to compress each table's row of data. Repeated rows are not encoded*... Furthermore, column 1, lines 32-34, ...*These comprise thirty two values used to point to the start location of the row data stored in one of the two previously compressed tables*... Bett teaches the reduction of rows based upon repetition where the row contains index and quantization step information.)

a second step of converting the converted allocation tables into a single first table by reducing each group of subbands sharing said pattern to one; (Bett, column 1, lines 29-34, ...*the four quantization tables used in MPEG1 (Layer 2) can be compressed into two tables. However, to recreate the original tables, an additional four*

tables are required. These comprise thirty two values used to point to the start location of the row data stored in one of the two previously compressed tables..., The secondary tables (corresponding to the four tables) provide offset values that point to the previous two tables and thus the first table.)

a third step of defining, in a second table, offset values each corresponding to one subband, which are used for referencing the first table; (Bett, column 1, lines 29-34, *...the four quantization tables used in MPEG1 (Layer 2) can be compressed into two tables. However, to recreate the original tables, an additional four tables are required. These comprise thirty two values used to point to the start location of the row data stored in one of the two previously compressed tables...*, The secondary tables (corresponding to the four tables) provide offset values that point to the previous two tables and thus the first table.)

the compression process stores the first and second tables, as the compressed table, in the memory and the decoding process includes: a first step of obtaining an offset value by referencing the second table using a subband as a key; (Bett, column 5, lines 4-10, *...which of the four compressed quantization per subband tables to use*... Furthermore, column 6, lines 42-44, *...The number of bits per audio sample is decoded for each of the thirty two subbands using a loop counter called sb being initialized to zero (step 202)*... Each of the subbands is decoded and each selects a secondary table in accordance with the instant application. Each subband is decoded so each is used as a "key" to determine an offset value in a secondary table. Fig. 1 (105) specifically shows the subband as the index reference.)

a second step of referencing the first table using the offset value obtained in the first step to obtain the number of quantization steps from said pattern read out. (Bett, column 1, lines 32-34, *...These comprise thirty two values used to point to the start location of the row data stored in one of the two previously compressed tables...*, The offset value in the secondary table is derived by the subband as shown in the rejection above and then further points to the starting location of the row data. The quantization data is then read from the compressed tables that are referenced.)

As per claim 2, claim 1 is incorporated and Bett fails to specifically teach:

the second step of the compression process, the first table is further converted by using a bit allocation where each bit uniquely represents the number of quantization steps (Official notice is taken because it would have been obvious to someone of ordinary skill that bits would uniquely represent an overall number, in this case, a number of quantization steps such as standard binary notation where each bit uniquely represents a number. This would be advantageous because a computer implementing the method can easily perform binary operations without base converting.)

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Refer to PTO-892, Notice of References Cited for a listing of analogous art.

12. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to GREG A. BORSETTI whose telephone number is (571)270-3885. The examiner can normally be reached on Monday - Thursday (8am - 5pm Eastern Time).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, RICHEMOND DORVIL can be reached on 571-272-7602. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Greg A. Borsetti/
Examiner, Art Unit 2626

/Talivaldis Ivars Smits/
Primary Examiner, Art Unit 2626

9/30/2008